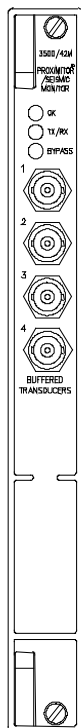


3500/42M Proximator*/Seismic Monitor

Bently Nevada* Asset Condition Monitoring



Description

The 3500/42M Proximator/Seismic Monitor is a 4-channel monitor that accepts input from proximity and seismic transducers, conditions the signal to provide various vibrations and position measurements, and compares the conditioned signals with user-programmable alarms. The user can program each channel of the 3500/42M using the 3500 Rack Configuration Software to perform any of the following functions:

- Radial Vibration
- Thrust Position
- Differential Expansion
- Eccentricity
- REBAM*
- Acceleration
- Velocity
- Shaft Absolute
- Circular Acceptance Region

Note: The monitor channels are programmed in pairs and can perform up to two of these functions at a time. Channels 1 and 2 can perform one function, while channels 3 and 4 perform another (or the same) function.

The primary purpose of the 3500/42M monitor is to provide:

1. Machinery protection by continuously comparing monitored parameters against configured alarm setpoints to drive alarms.
2. Essential machine information for both operations and maintenance personnel.

Each channel, depending on configuration, typically conditions its input signal to generate various parameters called “static values”. The user can configure Alert setpoints for each active static value and Danger setpoints for any two of the active static values.



I/O Module (barrier)

Dimensions (Height x Width x Depth)

241.3 mm x 24.4 mm x 163.1 mm
(9.50 in x 0.96 in x 6.42 in).

Weight

0.46 kg (1.01 lb.).

Rack Space Requirements

Monitor Module

1 full-height front slot.

I/O Modules

1 full-height rear slot.

Ordering Information

General

The 3500/42M Module requires the following (or later) firmware, and software revisions:

3500/01 Software – Version 2.50

3500/02 Software – Version 2.20

3500/03 Software – Version 1.21

External Termination Blocks cannot be used with Internal Termination I/O Modules.

When ordering I/O Modules with External Terminations the External Termination Blocks and Cable must be ordered separately for each I/O Module.

Bussed External Termination Blocks are to be used with TMR I/O Modules only.

Internal Barrier I/O Modules

Consult the 3500 Internal Barrier specification sheet (part number 141495-01) if the Internal Barrier Option is selected.

Shaft Absolute

The Shaft Absolute Channel Type requires the following (or later) firmware and software revisions:

3500/42M Module Firmware – Revision B

3500/01 Software – Version 2.61

DM2000 Software - Version 3.10.

Requires the M version of the 3500 Proximitor/Seismic Monitor.

REBAM

The REBAM channel type requires the following (or later) firmware, and software revisions:

3500/40M Module Firmware – Revision 2.1

3500/01 Software – Version 3.30

3500/02 Software – Version 2.40

3500/03 Software – Version 1.40

DM2000 Software - Version 3.40.

Requires the M version of the 3500 Proximitor Monitor.

Acceleration II

The Acceleration II channel type requires the following (or later) firmware, and software revisions:

3500/42M Module Firmware – Revision 2.10

3500/01 Software – Version 3.20

DM2000 Software - Version 3.30.

Requires the M version of the 3500 Proximitor Monitor.

Velocity II

See Acceleration II.

Circular Acceptance Region

See Acceleration II.

Ordering Options

Proximitor Seismic Monitor 3500/42-AXX-BXX

A: I/O Module Type

- 01** Prox/Seismic I/O Module with Internal Terminations
- 02** Prox/Seismic I/O Module with External Terminations
- 03** TMR Prox/Seismic I/O Module.
- 04** I/O Module with Internal Barriers (4 x prox./accel. ch's) and Internal Terminations
- 05** I/O Module with Internal Barriers (2 x prox./accl. + 2 x channels) and Internal Terminations
- 06** I/O Module with Internal Barriers (4 x Velomitor channels) and Internal Terminations
- 07** Shaft Absolute I/O Module with Internal Terminations
- 08** Shaft Absolute I/O Module with External Terminations
- 09** Prox/Velom I/O Module with Internal Terminations
- 10** Prox/Velom I/O Module with External Terminations

Note 1: The following table shows the ordering option and supported transducer types.

Ordering Option	Prox/Accel	Velom	Seismo-probe
A 01 & A 02	See Note 4		X
A 03	X	X	
A 04, A05, & A 06	See Note 2		
A 07 & A 08	X	X	X
A 09 & A 10	X	X	

Note 2: The following table shows the ordering options that are available for Internal Barriers with this monitor.

Option	Ch's 1 and 2	Ch's 3 and 4
A 04	Prox/Accel	Prox/Accel
A 05	Prox/Accel	Velomitorsensor
A 06	Velomitor sensor	Velomitor sensor

Note 3: HTVS transducer is supported in A 09 and A 10 I/O module type options.

Note 4: Prox/Accel and Velom are supported with the A 01 & A 02 options. However, unless a Seismoprobe* is used the appropriate choice is the A 09 and A 10 options.

B: Agency Approval Option

- 00** None
- 01** CSA/NRTL/C (Class 1, Div 2)
- 02** ATEX/CSA (Class 1, Zone 2)

Note: Agency Approval Option B 02 is only available with Ordering Options; A 04, A 05, A 06, and A 09.

External Termination Blocks

- 125808-02 Proximitor ET Block (Euro Style Connectors).
- 128015-02 Proximitor ET Block (Terminal Strip Connectors).
- 132242-01 Prox/Seismic Bussed TMR ET Block (Euro Style connectors).
- 132234-01 Prox Seismic Bussed TMR ET Block (Terminal Strip connectors).
- 128702-01 Recorder External Termination Block (Euro Style connectors).
- 128710-01 Recorder External Termination Block (Terminal Strip connectors).
- 140993-01 Shaft Absolute External Termination Block (Euro Style connectors).
- 141001-01 Shaft Absolute External Termination Block (Terminal Strip).
- 125808-08 Proximitor/Velomitor External Termination Block (Euro Style connectors).
- 128015-08 Proximitor/Velomitor External Termination Block (Terminal Strip connectors).

Cables

3500 Transducer (XDCR) Signal to External Termination (ET) Block Cable

129525 -AXXXX-BXX

A: Cable Length

0005 5 feet (1.5 metres)
0007 7 feet (2.1 metres)
0010 10 feet (3.0 metres)
0025 25 feet (7.6 metres)
0050 50 feet (15.2 metres)
0100 100 feet (30.5 metres)

B: Assembly Instructions

01 Not assembled
02 Assembled

3500 Recorder Output to External Termination (ET) Block Cable

129529 -AXXXX-BXX

A: Cable Length

0005 5 feet (1.5 metres)
0007 7 feet (2.1 metres)
0010 10 feet (3.0 metres)
0025 25 feet (7.6 metres)
0050 50 feet (15.2 metres)
0100 100 feet (30.5 metres)

B: Assembly Instructions

01 Not assembled
02 Assembled

Spares

176449-02

3500/42M Proximitors/Seismic Monitor

128229-01

Prox/Seismic I/O Module with Internal Terminations

128240-01

Prox/Seismic I/O Module with External Terminations

126632-01

TMR I/O Module with External Terminations

00530843

3500/42M Prox/Seismic I/O Module four-pin connector shunt

143489-01

3500/42M Monitor Manual

135489-01

I/O Module with Internal Barriers (Internal Terminations) (4 x Prox/Accel).

135489-02

I/O Module with Internal Barriers (Internal Terminations) (2 x Prox/Accel + 2 x Velomitor*)

135489-03

I/O Module with Internal Barriers (Internal Terminations) (4 x Velomitor*)

138708-01

Shaft Absolute I/O Module with Internal Terminations

138700-01

Shaft Absolute I/O Modules with External Terminations

00517018

3500/42M Shaft Absolute I/O Module 8-pin connector shunt

140471-01

Prox/Velom I/O Module with Internal Terminations

140482-01

Prox/Velom I/O Module with External Terminations

00561941

3500/42M Prox/Velom I/O Module 10-pin connector shunt

00580434

Internal I/O Module connector header, Euro style, 8-pin. Used on I/O modules 128229-01 and 138708-01.

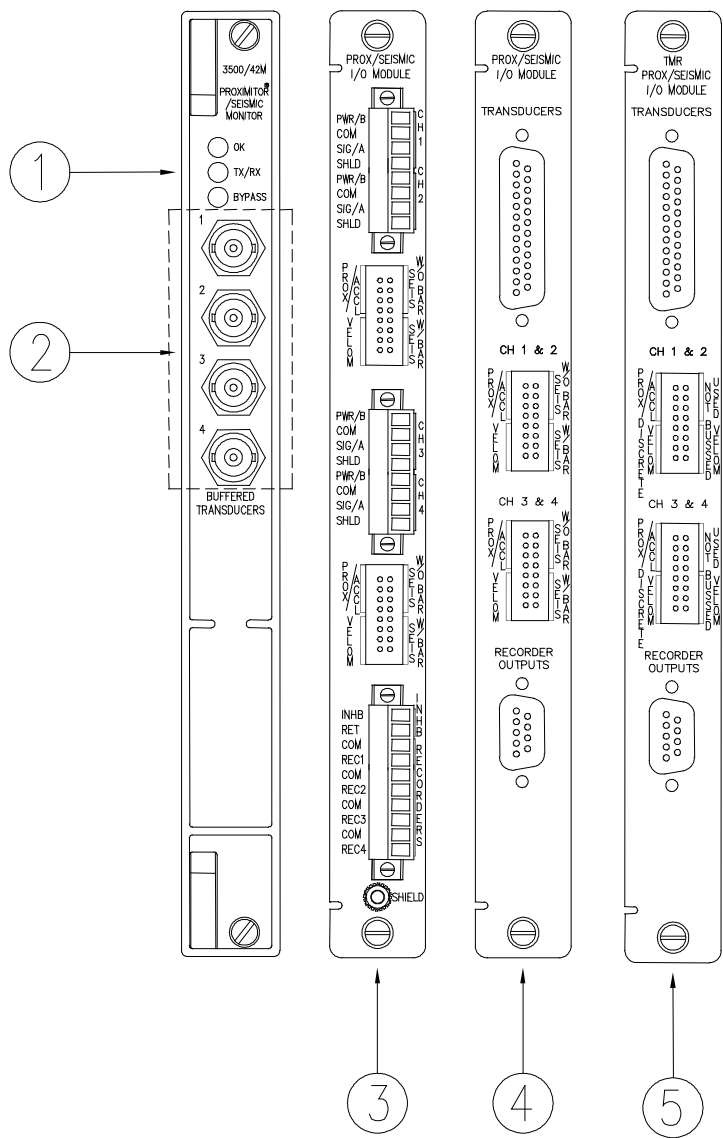
00580432

Internal I/O Module connector header, Euro style, 10-pin. Used on I/O modules 128229-01 and 138708-01.

00502133

Internal I/O Module connector header, Euro style, 12-pin.

Graphs and Figures



- 1. Status LEDs
- 2. Buffered Transducer Outputs
- 3. Prox/Seismic I/O Module with Internal Terminations
- 4. Prox/Seismic I/O Module with External Terminations
- 5. TMR I/O Module with External Terminations

Figure 1: Front and rear view of the Proximator*/Seismic Monitor